

### **REMARKS**

This Amendment is presented in response to the Office Action. By this paper, claim 25 is added. Claims 1-25 are now pending in this application.

Reconsideration of this application is respectfully requested in view of the aforementioned amendments to the claims and the following remarks. For the convenience and reference of the Examiner, the remarks of the Applicant are presented in the order in which the corresponding issues were raised in the Office Action.

#### **I. General Considerations**

Applicant notes that the remarks presented herein have been made merely to clarify the claimed embodiments from elements purported by the Examiner to be taught by the cited references. Such remarks should not be construed as an acquiescence, on the part of the Applicant, as to the purported teachings or prior art status of the cited references, nor as to the characterization of the cited references advanced by the Examiner. Accordingly, Applicant reserves the right to challenge the purported teaching and prior art status of the cited references at any appropriate time.

#### **II. Rejection of Claims 1-24 Under 35 U.S.C. § 103(a)**

Applicant respectfully notes at the outset that in order to establish a *prima facie* case of obviousness, it is the burden of the Examiner to demonstrate that three criteria are met: first, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings; second, there must be a reasonable expectation of success; and third, the prior art reference (or references when combined) must teach or suggest all the claim limitations. *See* M.P.E.P. § 2143.

Turning now to the rejections, the Examiner has rejected claims 1-24 under 35 U.S.C. § 103(a) as being unpatentable over US 6,597,713 to Ouichi (“*Ouchi*”) in view of US 2003/0109142 to Cable et al. (“*Cable*”). However, Applicant respectfully disagrees with the Examiner and submits that, for at least the reasons outlined herein, this rejection should be withdrawn.

##### **a. claims 1-5, 8, 14-17 and 24**

In rejecting claims 1-5, 8, 14-17 and 24, the Examiner concedes that “Ouichi lacks a light sensor blocks only part of the light beam produced by said vertical cavity surface emitting laser 21 during use

such that light of the light beam not blocked by said light sensor is allowed to pass into said etched cavity.” The Examiner then asserts that “Cable teach in Fig.6a a light sensor 48 blocks only part of the light beam produced by the vertical cavity surface emitting laser 46 during use such that light of the light beam not blocked by the light sensor 48 is allowed to pass” (emphasis added). Finally, the Examiner concludes that it would be obvious to “provide Ouichi a light sensor blocks only part of the light beam produced by the vertical cavity surface emitting laser during use such that light of the light beam not blocked by the light sensor is allowed to pass as taught by Cable.” As discussed below however, Applicant respectfully submits that the Examiner has failed to establish a *prima facie* case of obviousness with respect to the rejected claims.

For example, the Examiner asserts that the “light sensor 48” of *Cable* “blocks only part of the light beam produced by the vertical cavity surface emitting laser 46 during use.” However, that is an inaccurate characterization. In particular, Fig. 6a of *Cable* does not indicate any portion of the “emitted light pathway 43” as being blocked by the “light sensor 48.” Moreover, *Cable* states with regard to Fig. 6a that “The photodetector 48 formed in a silicon layer on a top surface 45 of the sapphire substrate 44 is configured to surround the emitted light pathway 43” (p. 9, ¶ 88) (emphasis added). Contrary to the assertion of the Examiner then, it would thus appear that the “photodetector 48” of *Cable* does not block any portion of the “emitted light pathway 43.” Accordingly, to the extent that the rejection of the claims is based upon the aforementioned mischaracterization of *Cable*, that rejection is not well founded and should accordingly be withdrawn.

As noted above, the Examiner has also asserted that it would be obvious to modify the *Ouichi* device, as exemplified at Fig. 19 of *Ouichi*, to include the “light sensor 48” of *Cable*. In this regard, *Cable* refers to a “photodetector 48” that relies for its functionality on a reflective “back surface 47” of a sapphire substrate. See, e.g., p. 9, ¶ 88 of *Cable* (“Light from the VCSEL 46 is reflected from back surface 47 of the sapphire substrate 44 and impinges on the depletion region 82 of the extended DTMOs transistor, beneath gate 84”), and Fig. 6a of *Cable*. However, neither Fig. 19 (referred to by the Examiner) of *Ouichi*, nor the corresponding discussion (col. 15, lines 50-67, continuing to col. 16, lines 1-5) disclose, or even suggest, the use of such a reflective back surface. Moreover, the Examiner has not established that it would be obvious to modify the *Ouichi* device to include such a surface. Thus, even if the “light sensor 48” of *Cable* were incorporated in some fashion - the Examiner asserts it would be obvious to do so but does not indicate how - into the *Ouichi* device, the “light sensor 48” simply could not

operate. Contrary to the assertion of the Examiner then, there is clearly no motive to incorporate the “light sensor 48” of *Cable* into the *Ouichi* device.

For at least the foregoing reasons, Applicant respectfully submits that the Examiner has failed to establish a *prima facie* case of obviousness with respect to claims 1-5, 8, 14-17 and 24. Applicant thus further submits that the rejection of those claims has been overcome and should be withdrawn.

**b. claims 6-7, 9-11, 12, 13, 18, 19, 20 and 21-23**

Each of claims 6-7, 9-11, 12, 13, 18, 19, 20 and 21-23 depends from one of independent claims 1, 8 and 14, discussed at II.a above. For at least the reasons outlined in the aforementioned discussion, Applicant respectfully submits that the Examiner has likewise failed to establish a *prima facie* case of obviousness with respect to claims 6-7, 9-11, 12, 13, 18, 19, 20 and 21-23. Particularly, the aforementioned discussion makes clear that even if the purported teachings of the references were combined as suggested by the Examiner, the resulting combinations nonetheless fail to include all the limitations of the claims. Moreover, there is no motive to combine the references in the manner suggested by the Examiner since such a combination would render at least part of the device non-functional. Applicant thus submits that the rejection of claims 6-7, 9-11, 12, 13, 18, 19, 20 and 21-23 has been overcome and should be withdrawn.

**III. New Claim 25**

Applicant respectfully submits that, consistent with the discussion presented herein, new claim 25, which is directed to a combination that includes, among other things, “an optical power sensor disposed on a surface of said substrate and positioned in said light path between said vertical cavity surface emitting laser and said cavity,” is patentably distinct from the devices purported by the Examiner to be disclosed in the references that the Examiner has cited.

In this connection, Applicant respectfully notes that reference to the aforementioned exemplary limitation is not intended, nor should it be construed, to be either an admission or assertion by the Applicant that patentability of Applicant’s new claim 25, or any other claim(s), hinges on the presence of such limitation. Rather, Applicant submits that each of the now pending claims, considered in its respective entirety, patentably distinguishes over the references cited by the Examiner.

Application No. 10/028,439  
Docket No. 15436.437.5  
Reply to Office Action mailed November 3, 2004

### **CONCLUSION**

In view of the remarks submitted herein, Applicant respectfully submits that each of the pending claims 1-25 is now in condition for allowance. Therefore, reconsideration of the rejections is requested and allowance of those claims is respectfully solicited. In the event that the Examiner finds any remaining impediment to a prompt allowance of this application that could be clarified in a telephonic interview, the Examiner is respectfully requested to initiate the same with the undersigned attorney.

Dated this 20<sup>th</sup> day of April, 2005.

Respectfully Submitted,

A handwritten signature in black ink, appearing to read 'P. Malen, Jr.', with a long horizontal flourish extending to the right.

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